



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : KARL, Stefan
Appl. No. : 09/802,982
Filed : March 12, 2001
Title : DEVICE FOR HEATING AND/OR AIR-CONDITIONING
THE PASSENGER COMPARTMENT OR A MOTOR
VEHICLE

Group Art Unit : 3753
Examiner : FORD, John K.
Docket No. : 01200.473

REPLY BRIEF UNDER 37 C.F.R. § 1.193

September 14, 2005

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Examiner's Answer mailed July 21, 2005, Appellant respectfully requests the Board of Patent Appeals and Interferences to consider the following additional arguments and reverse the decision of the Examiner in whole.

REMARKS

Claims 12, 15 and 17-23 stand rejected under 35 U.S.C. 112, first paragraph. The Examiner insists that claims 12, 15 and 17-23 contain “some automatic control system of these valves to produce some intended effect on compressor pressure”.

Claim 12 recites the first and second valve systems for controlling the quantity of heat-carrying fluid. Valves, by definition, are devices that control or regulate the flow of gases, liquids, or loose materials through piping or through apertures by opening, closing, or obstructing ports or passageways. In other words, the valve is a control means for fluid flow. Valves may be operated either manually or automatically, but they, nevertheless, control fluid flow. Clearly, any person skilled in the art would find the written description of the invention along with accompanying drawings sufficient to make and use the present invention.

Furthermore, Applicant reiterates that, contrary to the Examiner’s allegations, claims 12, 15 and 17-23 do not recite any automatic control of the valve system in the device of the present invention.

Claims 2, 8, 9, 11 and 12 stand rejected under 35 U.S.C. 112, second paragraph.

The Examiner insists that in claims 2 and 11 it is unclear which of the two claimed evaporators or two claimed condensers of claim 1, applicant is referring to. Claims 2 and 11 recite the evaporator and the condenser of the heat-pump loop. As clearly recited in claim 1, the heat-pump loop has only one (first) evaporator and only one (first) condenser. The second evaporator and condenser are included in the air-conditioning branch of the claimed device.

The Examiner repeats that claims 8 and 9 recite the accumulator that is shown in non-elected Fig. 1, but doesn't appear to exist in elected Figure 3. Applicant reiterates that the specification clearly discloses on page 12, lines 18-21, that "Another difference consists in the fact that the accumulator, separated in the embodiment of Figure 1, is integrated into the evaporator 16" (emphasis added). In other words, the reference numeral 16 depicts both the evaporator and accumulator as an integrated unit.

The Examiner further alleges that claim 12 is very vague and that a host of not previously claimed or not well-defined structure. The Examiner mentions "a multiplicity of disclosed valves being claimed". In fact, claim 12 is an independent claim reciting a first valve system, a second valve system, and an anti-return valve. Again, Applicant believes that all elements recited in claim 12, including "first valve system" and the "second valve system", are well-defined. Moreover, as clearly shown in Fig. 3, the anti-return valve 42 is disposed upstream of the evaporator 16.

Claims 1, 2, 10, 11, 13, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of JP 10-76837 and Enomoto, Figure 8, and the description thereof.

As Applicant already noted in the Appeal Brief of May 18, 2005, JA '837 is specifically directed to the "automobile heating system that is capable of improvement in heating performance at both front and rear sides", while Enomoto clearly states that "An object of the present invention is to increase the heating ability of an air conditioner by using

a high-temperature and high-pressure gas-phase refrigerant” (emphasis added). Applicant further stated that the prior art provides no suggestion or motivation to combine the heating system of JA ‘837 provided for improvement in heating performance at both front and rear sides, with the a/c circuit of Enomoto provided for increasing heating ability of the conditioner, as JA ‘837 has no conditioner.

The Examiner argues that the motivation to combine JA ‘837 and Enomoto would be “the improved heating circuit of Noda to Enomoto to obtain the advantage of that improved heating performance in the winter.” The Examiner then states that this modification would not change the cooling performance. In other words, to follow the examiner’s line of reasoning, one of ordinary skill in the art would add the air-conditioning circuit to the heating system to enhance heating characteristics of the vehicle. It does not sound obvious. Clearly, one of ordinary skill in the art would enhance the heating system by increasing its capacity to improve “heating performance in the winter”. Moreover, the Examiner’s statement does not address the need for a teaching found in the prior art that suggests combining the specific prior art components to realize the present invention.

The Examiner erroneously noted that Applicant conceded that the Examiner’s rejection is sound. Contrary to the Examiner’s allegations, Applicant maintains that the prior art submitted by the Examiner to modify JP ‘837 fails to teach or render obvious the features shown above. Even if some of the concepts illustrated above are known in the prior art, there is no suggestion or motivation to modify JP ‘837 to achieve the system shown above.

Applicant also argued In the Brief that the modular-type modification suggested by the Examiner would not occur to one of ordinary skill in the art, and that the Examiner's assertion that these references may be modified to achieve the limitations of the present invention would clearly result from hindsight reconstruction. The Examiner responded that there is no hindsight here because the motivation relied upon is not disclosed by Appellant. Contrary to the Examiner's allegations, the JP '837 is described in detail in the present application (see page 2, line 24 – page 3, line 31) as the device exhibiting several drawbacks. As then stated in the present application, "The object of the present invention is especially to remedy these drawbacks" (i.e. drawbacks of the JP '837).

Regarding claims 8 and 9, Applicant reiterates that the prior art fails to disclose refrigerant-fluid accumulator common to the air-conditioning loop and to the heat-pump loop, as clearly shown in Figs. 2 and 4 of Echigoya.

Claims 12, 15 and 17-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Whalen or JP '134 or FR '278.

Regarding claim 12: In addition to the above arguments regarding the rejection of claim 1 and arguments mentioned in the Brief, Appellant notes that claim 12 recites a modular casing containing the first evaporator, first valve system, an anti-return valve, the first condenser, second valve system, the switching device and a pressure-reduction means. The Examiner alleges that JP '837 teaches a module (an integrated structure in Figs. 3 and 4). Contrary to the examiner's allegations, the integrated unit 30 of Fig. 3 shows not the modular

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casing, but the liquid tank part 32 corresponding to the liquid tank 4, with the condenser part 31, the evaporator par 33 and the expansion valve 5 disposed outside the tank part 32. The liquid tank part 32 could not possibly be interpreted as the modular casing. Moreover, as noted above, the components of the device are disposed outside the tank part 32, not within the casing recited in claim 12.

Regarding claim 15: the claimed invention is disclosed in page 9, lines 2-15 and page 12, lines 26-28.

Regarding claim 20: the claimed invention is disclosed in page 8, lines 14-24.

Regarding claim 22: the claimed invention is disclosed in page 9, lines 24-32

Regarding claim 23: the claimed invention is disclosed in page 7, lines 18-28; page 8, lines 14-24; page 9, lines 2-7 and 13-15; and page 12, lines 26-28.


Applicant's reply to the Examiner's arguments not specifically responded in this Reply Brief is substantially the same as in the Appeal Brief of May 18, 2005.

Summarizing our reply, we would like to advise that the Examiner's rejection and line of reasoning is based solely on taking various separate pieces of the claimed device from a number of different prior art references and mechanically combining them into a device resembling the claimed device in the absence of any suggestion and/or motivation to do so.

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In view of the above reasons, it is respectfully submitted that this application is in condition for allowance, and the rejection of claims of the present invention should be overruled.

Respectfully submitted:
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